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- (c) then collecting said used PVPP from said slurry by filtration,
- (d) periodically regenerating fresh PVPP from the thus-collected used PVPP by contacting it with alkali and, after washing,
- (e) recycling the regenerated PVPP for reuse in step (a).

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Claim 12. (Amended) A continuous process according to claim 1 wherein said particle size is between 50 and 100 μm .

REMARKS

Claims 10-13 were rejected under '112 because the Examiner alleged that the phrases "continuous process", "periodically regenerating fresh PVPP" and "regenerated PVPP" (of step (e)) having a particle size of at least 10 μm are not found in the specification; and there is no antecedent basis for the phrase "the main flow", "suitable washing" or "particle sizes".

Applicant respectfully traverses the Examiner with respect to this rejection. Specifically, page 6, lines 10-13 states "continuous operation through the use of a continuously running centrifuge delivering recovered PVPP at relatively high solids content to one of a plurality of filters". Also page 5, lines 1-9; page 10, lines 1-11, claim 3, lines 4-7 and page 2, lines 1-4, "PVPP may be periodically regenerated by contacting it with ..."; also page 5, lines 11-16, 16-19, and 26-28, states "a particle size of at least 10 μm ". Thus the specification and claims provide a basis for these terms. The claims have been amended herein to obviate the indefiniteness of certain phrases, in particular the antecedent basis for the main flow, suitable washing and particle sizes. If further necessary, Applicant will conform the specification to language used in the claims. Reconsideration is respectfully requested.

Claims 4, 5 and 11 were rejected under '103 on Westermann for reasons given in the prosecution of the parent application.

The continuation application was filed on January 16, 2001 with a Simultaneous Amendment which cancelled original claims 1-9 while adding claims 10-13. Claims 10, 12 and 13 were not rejected on Westermann and are considered to be allowable once the '112 rejections are obviated. Applicant has cancelled claim 11 herein to narrow issues present with respect to this claim. Reconsideration and early allowance of amended claims 10 and 12-13 is respectfully solicited. In the Simultaneous Amendment, Applicant pointed out that newly added claims 10-13 further defined the invention in view of the decision of the Board of Patent Appeals and Interferences mailed November 29, 2000. In particular, the Board decided the appeal on the basis of the interpretation of the claim language "a main flow of the beverage". For clarity, the instant claims now recite "the main flow [of said thus-treated beer]".

Furthermore, the claims have been amended to recite a preferred PVPP particle size, i.e., 90% by weight of the PVPP particles have a particle size of at least 10 μm , and removal by centrifuging of at least 95% of the used PVPP from the treated beer in the form of a viscous paste or slurry thereby to form a separate flow stream consisting of the main flow stream of stabilized beer. Support for these amendments can be found, e.g., on page 5, lines 16-18 and page 4, lines 1-4 of the instant specification.

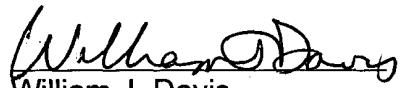
The instantly claimed process is believed to be patentable over Westermann for the following reasons. As urged by applicant and intimated by the Board, the process described by Westermann is conceptually and operationally totally different than applicant's claimed process. The main flow of beer in Westermann is from inlet 4 to outlet 5 via fluidized bed vessel 1 in which it contacts PVPP. A small part of this main flow is continuously taken off through line 6 and passed into wash station 7 which may have a centrifuge in it. Either by filtration or centrifugation, beer from line 6 is returned to the main flow by line 9. That the means of separation in the wash cycle is optional illustrates that Westermann had not appreciated the advantages of using a centrifuge in the main high volume flow stream. In that context, there is no equivalence whatsoever between filtration and centrifugation, for the reasons given.

Westermann stated that due to lower mass velocity in the upper, large-diameter, section of the vessel 1 absorbent particles will not be carried from the vessel through the line 5. Westermann believed that he was dealing with a situation similar to that of a catalytic cracker where a fluidized bed is maintained by gases; in that situation the specific gravity of the particles is orders greater than that of the gas and they will hardly be carried over at all. Here it is inevitable that large amounts of particles will be carried over into the line 5 by the main flow of the beverage and it is inevitable that the principal mode of separation of those particles from the main flow will be filtration; that is to say, in this respect the Westermann process is the standard prior art process.

On the other hand, in applicant's claimed continuous process, the main flow of beer treated with PVPP particles of a selected specific size is continuously centrifuged to remove at least 95% of the used PVPP therefrom in the form of a concentrated paste or slurry and to form a separate flow stream consisting of the main flow of stabilized beer. It is respectfully urged that Westermann does not fairly teach or suggest the claimed invention.

In view of the foregoing, Applicant respectfully believes that the claims as amended define patentable invention over the cited art. Reconsideration and early allowance of the amended claims is requested.

Respectfully submitted,


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MARKED-UP VERSION OF AMENDMENT TO THE CLAIMS IN ANSWER TO OFFICE ACTION MAILED 12/19/2002

Claim 10. (Amended) A continuous process for stabilizing the main flow of bright beer which comprises:

- (a) treating the main flow of said beer with polyvinyl polypyrrolidone (PVPP), at least 90% by weight of which has a particle size of at least 10 μm , in an amount between 10 and 100 g/hl of said beer, to allow said PVPP to absorb polyphenolic material from said beer,
- (b) continuously centrifuging the main flow of said thus-treated beer to simultaneously (1) remove at least 95% of the used PVPP therefrom in the form of a viscous concentrate paste or slurry in a beer carrier having a solids content of at least 25% by weight, and (2) to form a separate flow stream consisting of the main flow of stabilized beer,
- (c) then collecting said used PVPP from said slurry by filtration,
- (d) periodically regenerating fresh PVPP from the thus-collected used PVPP by contacting it with alkali and, after [suitable] washing,
- (e) recycling the regenerated PVPP for reuse in step (a).

Claim 12. (Amended) A continuous process according to claim 1 wherein said particle [sizes are] size is between 50 and 100 μm .